

ABSTRACT

A transcutaneous energy transfer device is provided which has a magnetic shield covering the primary winding of the device to reduce sensitivity of the device to conducting objects in the vicinity of the coils and to increase the percentage of magnetic field generated by the primary coil which reaches the secondary coil. This shield is preferably larger than the primary coil in all dimensions and is either formed of a high permeability flexible material, for example a low loss magnetic material in a flexible polymer matrix, with perforations formed in the material sufficient to permit ventilation of the patient's skin situated under the shield, or the shield may be formed of segments of very high permeability material connected by a flexible, porous mesh material.

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